

Status of the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A vibration isolation system for at least partially damping and isolating vibrations of a body, the system comprising:
 - a plurality of active isolator devices mechanically coupled to the body; and
 - a control system configured to control the active isolator devices, wherein the control system is configured to:
 - decouple vibrations in modal directions;
 - determine a modal compensation signal for each modal direction;
 - recouple each modal compensation signal into an active isolator control signal for each active isolator device; and
 - stabilize at least one unstable natural mode of the body.
2. (Original) The vibration isolation system according to claim 1, wherein the at least one unstable natural mode stabilized by the control system is directed substantially vertically.
3. (Original) The vibration isolation system according to claim 1, wherein the body is positioned on a base frame by air mounts.

4. (Original) The vibration isolation system according to claim 1, wherein a passive isolator device and an active isolator device engage the body at the same location on the body.
5. (Original) The vibration isolation system according to claim 1, wherein the system comprises a plurality of sensors to detect vibrations of the body.
- 6-20. (Canceled)
21. (Withdrawn) A lithographic apparatus, comprising:
 - an illumination system configured to provide a beam of radiation;
 - a support configured to support a patterning device, the patterning device configured to impart the beam with a pattern in its cross-section;
 - a substrate table configured to hold a substrate;
 - a projection system configured to project the patterned beam onto a target portion of the substrate; and
 - a vibration isolation system for at least partially damping and isolating vibrations of the projection system, the system comprising:
 - a plurality of active isolator devices mechanically coupled to the projection system and a control system configured to control the active isolator devices, wherein the control system is configured to:
 - decouple vibrations in modal directions;

determine a modal compensation signal for each modal
direction;

recouple each modal compensation signal into an active
isolator control signal for each active isolator
device; and

stabilize at least one unstable natural mode of the body.

22. (Withdrawn) An apparatus according to claim 21, wherein the at least one unstable natural mode stabilized by the control system is directed substantially vertically.
23. (Withdrawn) An apparatus according to claim 21, wherein the projection system is positioned on a base frame by air mounts.
24. (Withdrawn) An apparatus according to claim 21, wherein a passive isolator device and an active isolator device engage the projection system at the same location on the projection system.
25. (Withdrawn) An apparatus according to claim 21, further comprising a plurality of sensors to detect vibrations of the projection system.